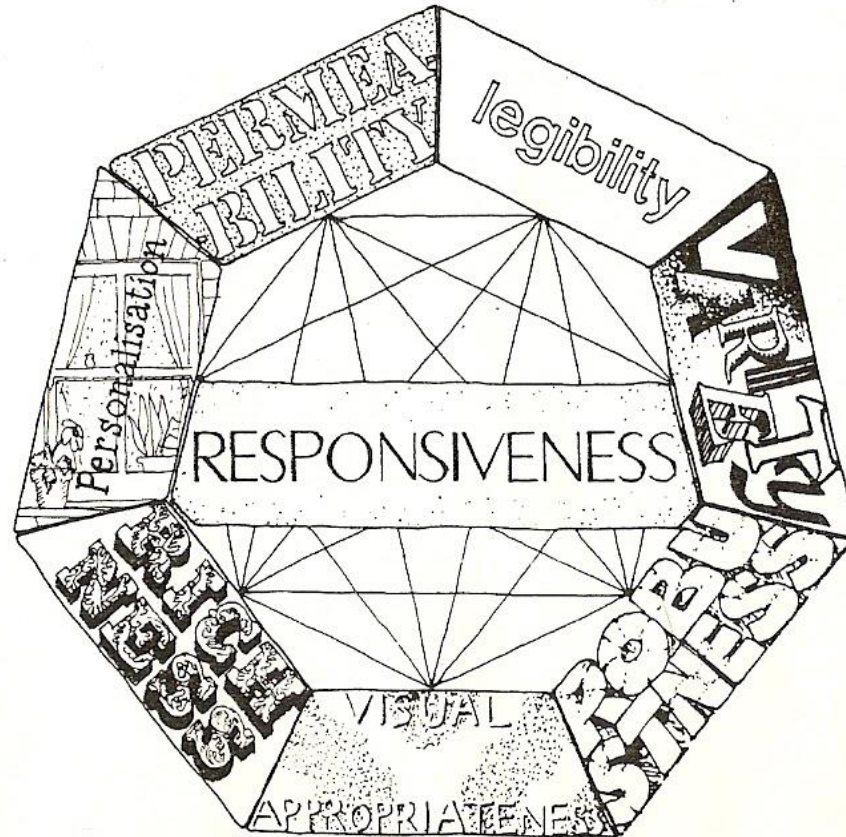


RESPONSIVE ENVIRONMENTS

BENTLEY ALCOCK MURRAIN McGLYNN SMITH



Bentley, Alcock et al (1985). RESPONSIVE ENVIRONMENTS: A Manual for Designers, London: The Architectural Press Ltd.

Responsive environment ?

The idea that the built environment should provide its users with:

- an essentially ***democratic*** setting
- enriching their opportunities by maximising the degree of ***choices*** available
- such places are ***responsive***

How does design affect choice?

PERMEABILITY: where can people go and where can they not go

VARIETY: range of uses available to people

LEGIBILITY: understand the opportunities offered

ROBUSTNESS: degree to which people can use a given place for different purposes

VISUAL APPROPRIATENESS: whether the detailed appearance of the place makes people aware of the choices available

RICHNESS: people's choices of sensory experience

PERSONALISATION: extent to which people can put their own stamp on a place

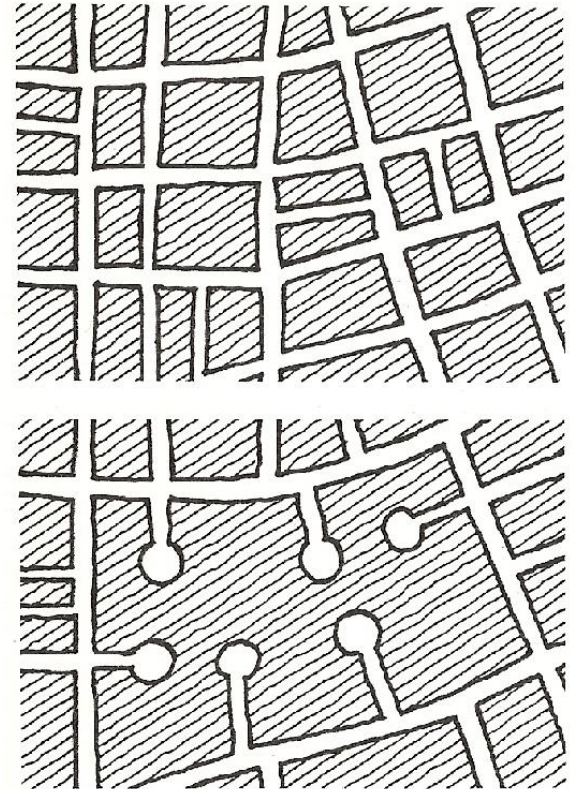


Bentley, Alcock et al (1985).
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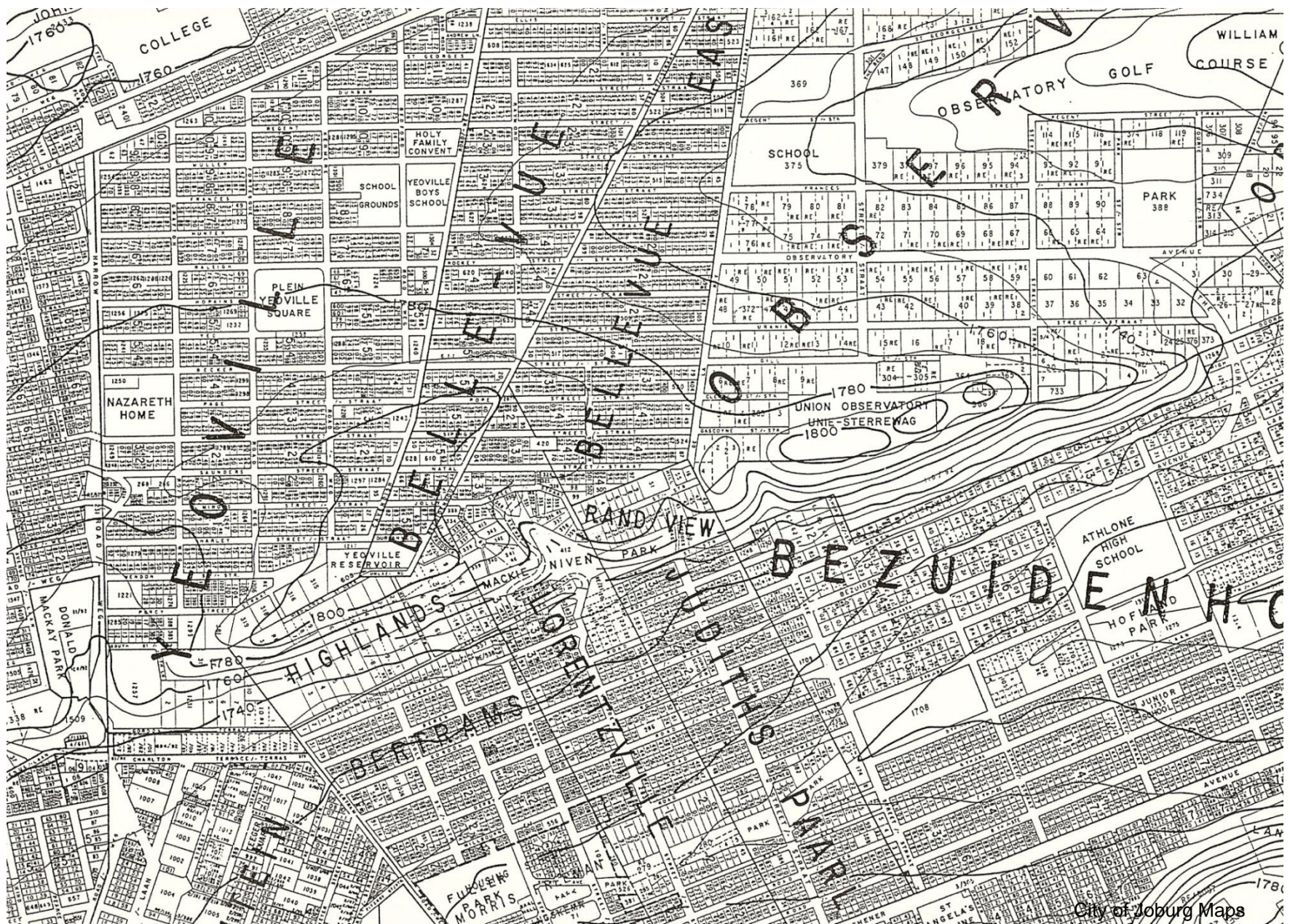
Permeability

Only places which are accessible to people can offer them choice. The quality of *permeability* - the number of alternative ways through an environment - is therefore central to making responsive places.

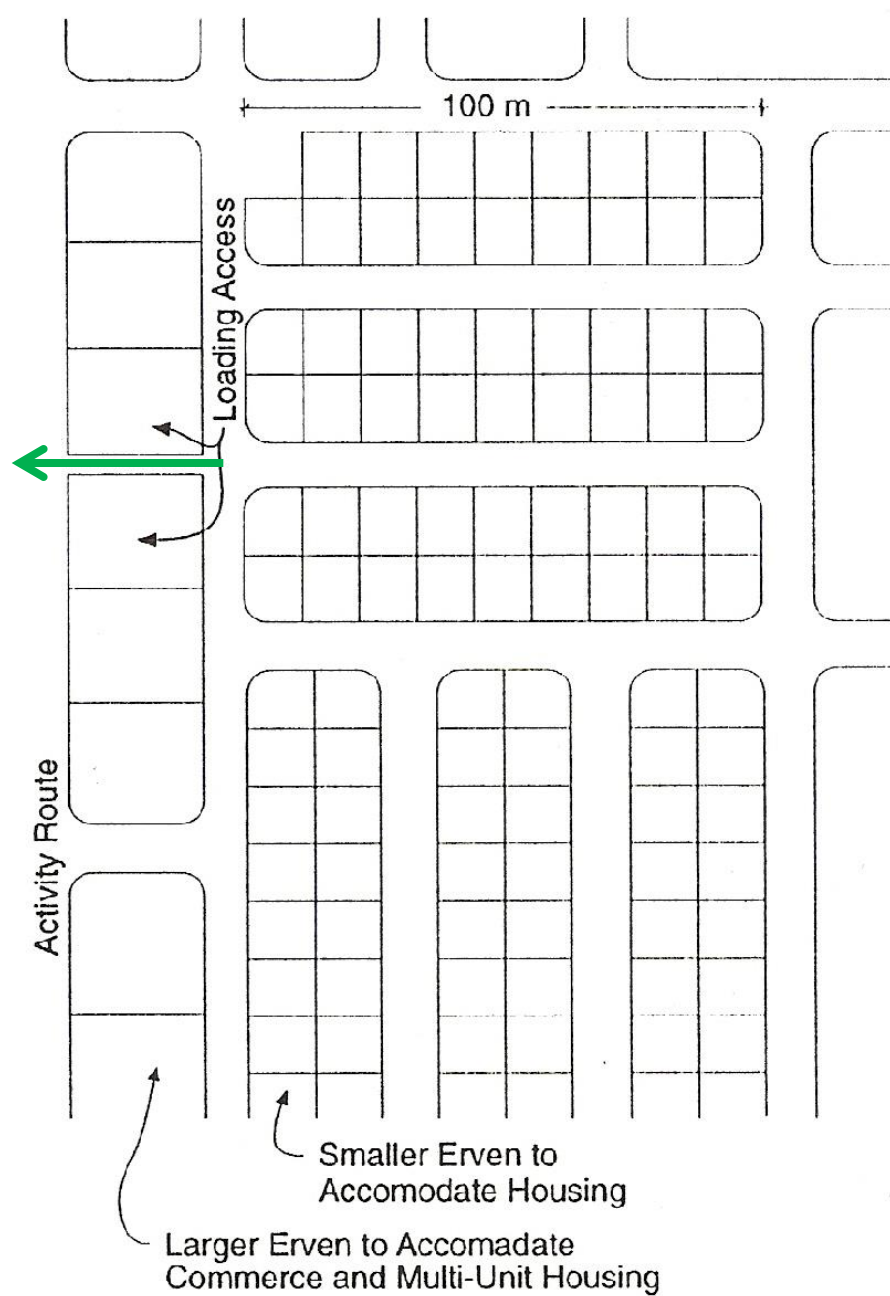
Permeability has fundamental layout implications. In the diagram below, the upper layout offers a greater choice of routes than the lower one: it is therefore more permeable.

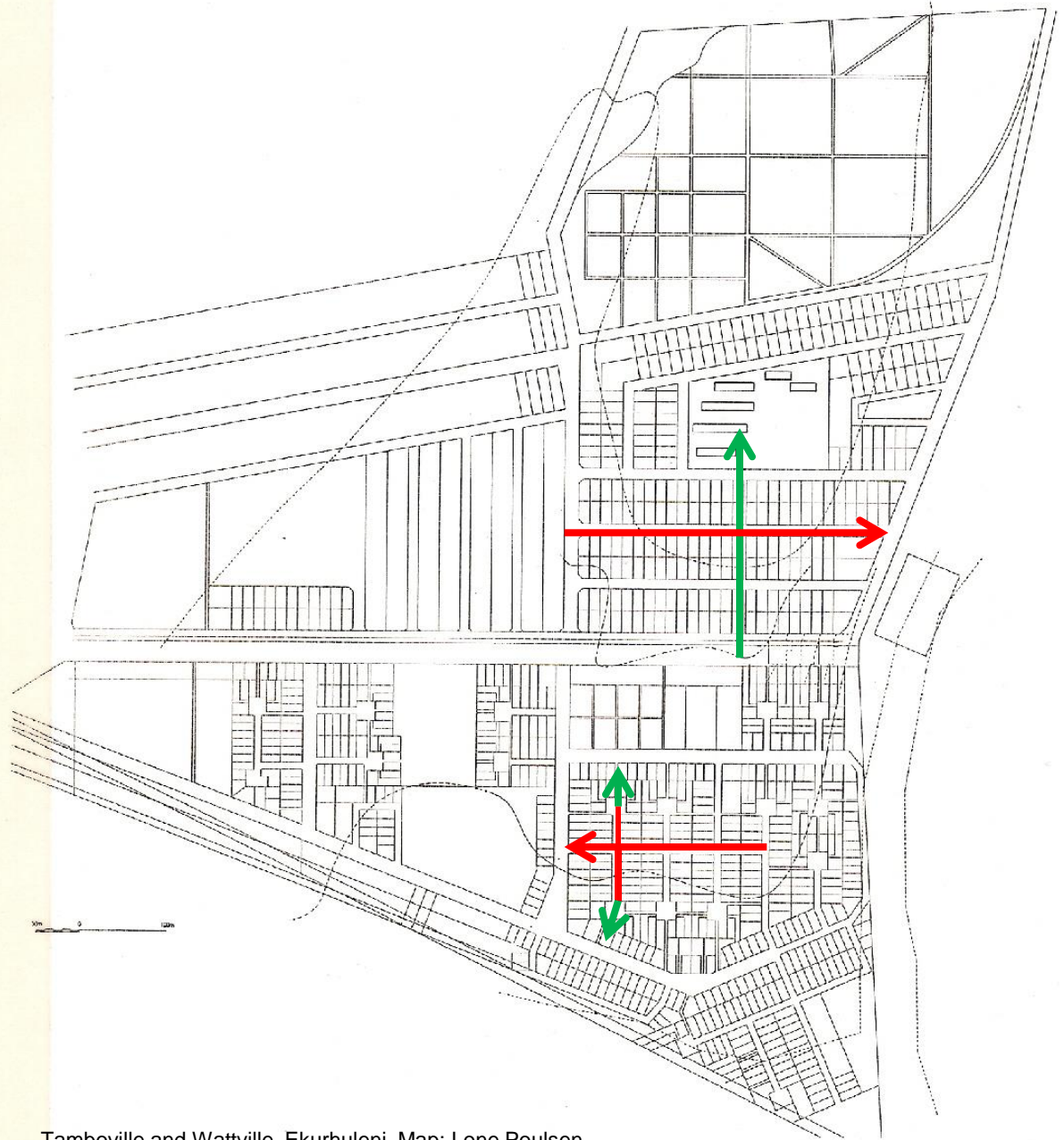


Because it is so basic to achieving responsiveness, permeability must be considered early in design. The designer must decide how many routes there should be, how they should link together, where they should go and - the other side of the coin - how to establish rough boundaries for blocks of developable land within the site as a whole. This design stage is covered in Chapter 1.

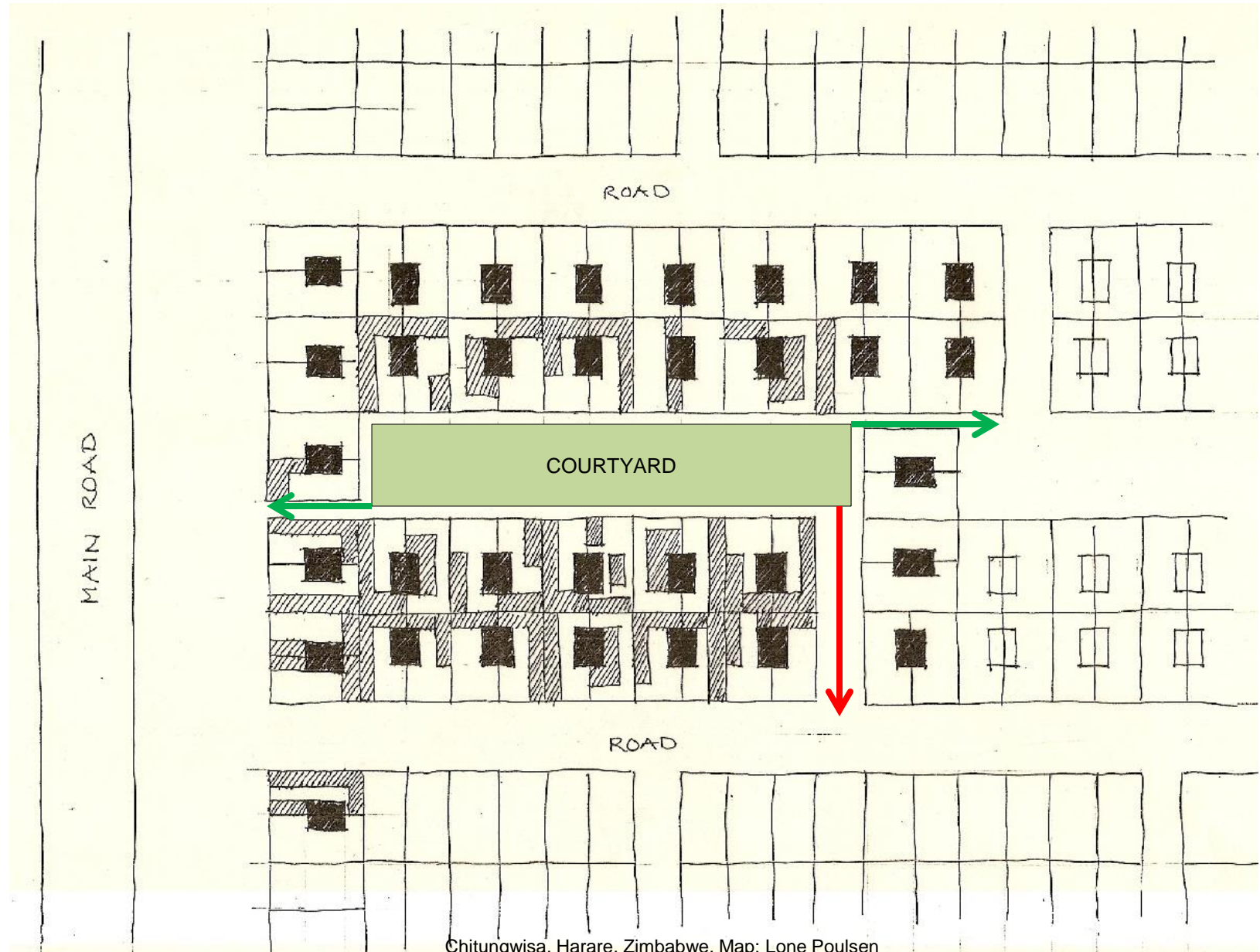


City of Joburg Maps





Tamboville and Wattville, Ekurhuleni, Map: Lone Poulsen



Chitungwisa, Harare, Zimbabwe, Map: Lone Poulsen



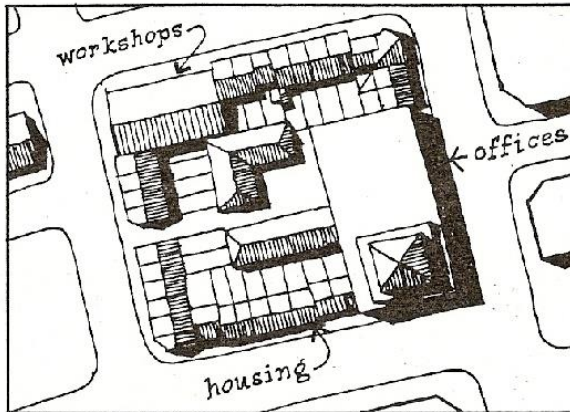


HOUSING GENERATOR: INTEGRATION OR FRAGMENTATION, The Housing Generator Competition for South African Cities, (1997) NAI Publishers

Variety

Permeability is of little use by itself. Easily accessible places are irrelevant unless they offer a choice of experiences. *Variety* - particularly variety of *uses* - is therefore a second key quality.

The object of this second stage in design, which is covered in Chapter 2, is to *maximise* the variety of uses in the project. First we assess the levels of demand for different types of uses on the site, and establish how wide a mix of uses it is economically and functionally feasible to have. Then the tentative building volumes already established as *spatially* desirable are tested to see whether they can feasibly house the desired mix of uses, and the design is further developed as necessary.



Legibility

In practice, the degree of choice offered by a place depends partly on how *legible* it is: how easily people can understand its layout. This is considered in the third stage of design.

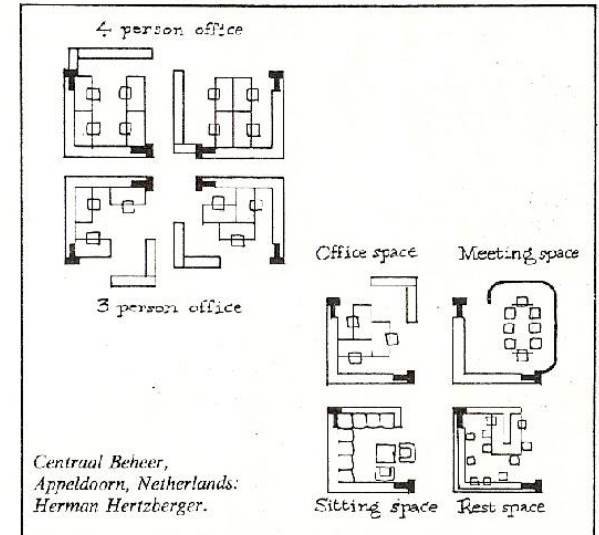
The tentative network of links and uses already established now takes on three-dimensional form, as the elements which give perceptual structure to the place are brought into the process of design. As part of this process, routes and their junctions are differentiated from one another by designing them with differing qualities of spatial enclosure. By this stage, therefore, the designer is involved in making tentative decisions about the *volumes* of the buildings which enclose the public spaces. This process is discussed in Chapter 3.

Bentley, Alcock et al (1985).
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Robustness

Places which can be used for many different purposes offer their users more choice than places whose design limits them to a single fixed use. Environments which offer this choice have a quality we call *robustness*. This is the subject of Chapter 4.

By this fourth stage in design, we have begun to focus on individual buildings and outdoor places. Our objective is to make their spatial and constructional organisation suitable for the widest possible range of likely activities and future uses, both in the short and the long term.



Visual appropriateness

The decisions we have already made determine the *general* appearance of the scheme. Next we must focus on what it should look like in more detail.

This is important because it strongly affects the *interpretations* people put on places: whether designers want them to or not, people *do* interpret places as having *meanings*. A place has *visual appropriateness* when these meanings help to make people aware of the choices offered by the qualities we have already discussed.

Designing for visual appropriateness forms the subject of Chapter 5. First a vocabulary of visual cues must be found, to communicate the levels of choice already designed into the place. The appearance of the project is then developed in detail, using these cues as the basis for design.

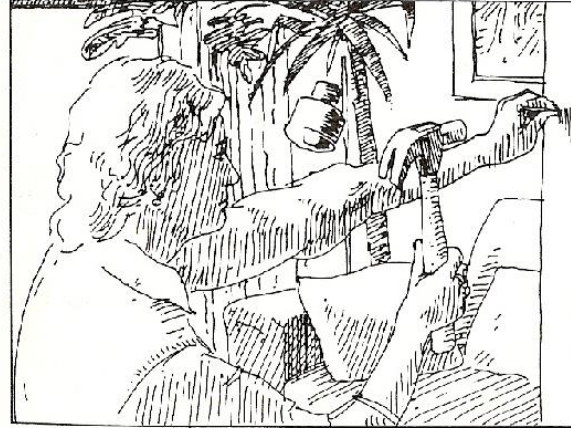
Richness

The decisions about appearance already discussed still leave room for manoeuvre at the most detailed level of design. We must make the remaining decisions in ways which increase the choice of sense-experiences which users can enjoy. This further level of choice is called *richness*: it is the concern of Chapter 6.

By this stage, we are dealing with the smallest details of the project. We must decide whereabouts in the scheme to provide richness, both visual and non-visual, and select appropriate materials and constructional techniques for achieving it.

Personalisation

The stages of design already covered have been directed at achieving the qualities which support the responsiveness of the environment itself, as distinct from the political and economic processes by which it is produced. This is not because we do not value the 'public participation' approach: it is highly desirable. But even with the highest level of public participation, most people will still have to live and work in places designed by others. It is therefore especially important that we make it possible for users to *personalise* places: this is the only way most people can put their own stamp on their environment.



Designing for personalisation is discussed in Chapter 7. Here the designer is making the final detailed decisions about the forms and materials of the scheme; both to *support* personalisation, and to ensure that its results will not erode any *public* role the building may have.

Bentley, Alcock et al (1985).
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The urban framework

- Permeability

designing the overall layout of routes and development blocks

- Variety

Locating the uses on site

- Legibility

designing the massing of the buildings and the enclosure of public space

- Robustness

designing the spatial and constructional arrangements of individual buildings and outdoor places

The individual buildings and spaces

- Visual appropriateness

designing the external image

- Richness

developing the design for sensory choice

- Personalisation

making the design encourage people to put their own mark on the places where they live and work